

AMENDMENTS TO THE CLAIMS

1-3. (Cancelled)

4. (Currently amended) An IL-15 mutein, characterized in that it has a sequence that is ~~derivable~~ **directly derived** from human mature wild-type IL-15 by one substitution within the region spanning from residue 44 to residue 52, or from residue 64 to residue 68, or from residue 64 to residue 69, this residue numbering corresponding to the human mature wild-type IL-15, provided that the IL-15 mutein resulting therefrom has an affinity for binding to IL-15Ralpha that is either not different from, or higher than the affinity of human mature wild-type IL-15 for binding to IL-15Ralpha.

5. (Currently amended) The IL-15 mutein according to claim 4, characterized in that it has a sequence that is ~~derivable~~ **directly derived** from human mature wild-type IL-15 by one substitution within the region spanning from residue 44 to residue 52, this residue numbering corresponding to the human mature wild-type IL-15, provided that the IL-15 mutein resulting therefrom has an affinity for binding to IL-15Ralpha that is either not different from, or higher than the affinity of human mature wild-type IL-15 for binding to IL-15Ralpha, wherein said IL-15 mutein is an IL-15 agonist.

6. (Currently amended) The IL-15 mutein according to claim 4 or 5, characterized in that said one substitution is a substitution of ~~at least one hydrophobic side chain selected from L, V and I, or of one non-charged polar side chain selected from S, N, and or Q by a charged group selected from D, E, K, and or R.~~

7. (Currently amended)] The IL-15 mutein according to claim 4 or 5, characterized in that said one substitution is a substitution of ~~one charged polar side chain selected from E by the oppositely charged group K.~~

8. (Canceled)

9. (Previously presented) The IL-15 mutein according to claim 4 or 5, characterized in that said one substitution is a substitution of one of residues 45, 51, 52.

10. (Currently amended) The IL-15 mutein according to claim 4 or 5, characterized in that said one substitution is a substitution of residue 45 by D or ~~[[B]]~~ E.

11. (Canceled)

12. (Previously presented) The IL-15 mutein according to claim 4 or 5, characterized in that said one substitution is a substitution of residue 51 by D.

13. (Canceled)

14. (Previously presented) The IL-15 mutein according to claim 4 or 5, characterized in that said one substitution is a substitution of residue 52 by D.

15. (Canceled)

16. (Withdrawn, Currently amended) The IL-15 mutein according to claim 4, characterized in that it is an IL-15 antagonist and that it has a sequence that is ~~derivable~~ **directly derived** from human mature wild-type IL-15 by one substitution within the region spanning from residue 64 to residue 69.

17. (Withdrawn) The IL-15 mutein according to claim 4 or 16, characterized in that said one substitution is a substitution of one of residues 64, 65, 68.

18. (Withdrawn) The IL-15 mutein according to claim 4 or 16, characterized in that said one substitution is a substitution of residue 64 by K.

19. (Withdrawn) The IL-15 mutein according to claim 4 or 16, characterized in that it has the sequence of SEQ ID NO:41.

20. (Withdrawn) The IL-15 mutein according to claim 4 or 16, characterized in that said at substitution is a substitution of residue 65 by K.

21. (Withdrawn) The IL-15 mutein according to claim 4 or 16, characterized in that it has the sequence of SEQ ID NO:45.

22. (Withdrawn) The IL-15 mutein according to claim 4 or 16, characterized in that said one substitution is a substitution of residue 68 by D.

23. (Withdrawn) The IL-15 mutein according to claim 4 or 16, characterized in that it has the sequence of SEQ ID NO:47.

24. (Withdrawn) The IL-15 mutein according to claim 4 or 16, characterized in that said one substitution is a substitution of residue 69.

25. (Withdrawn) The IL-15 mutein according to claim 4 or 16, characterized in that said one substitution is a substitution of residue 69 by R.

26. (Withdrawn) The IL-15 mutein according to claim 4 or 16, characterized in that it has the sequence of SEQ ID NO:85.

27. (Currently amended) A conservative fragment of ~~[[the]]~~ an IL-15 mutein ~~of claim 4,~~
wherein

said IL-15 mutein has a sequence directly derived from human mature wild-type IL-15 by one substitution within the region spanning from residue 44 to residue

52, or from residue 64 to residue 68, or from residue 64 to residue 69, wherein the residue numbering corresponds to the human wild-type IL-15; and

said conservative fragment of an IL-15 mutein ~~which~~ still comprises the mutated 44-52 region and/or mutated 64-68 region and/or mutated 64-69 region, provided that the IL-15 mutein fragment resulting therefrom still has an affinity for binding to IL-15Ralpha that is either not different from, or higher than the affinity of human mature wild-type IL-15 for binding to IL-15Ralpha.

28. (Previously presented) The IL-15 mutein fragment according to claim 27, characterized in that it still comprises the mutated 44-52 region, provided that the IL-15 mutein fragment resulting therefrom still has an affinity for binding to IL-15Ralpha that is either not different from, or higher than the affinity of human mature wild-type IL-15 for binding to IL-15Ralpha, wherein said conservative fragment of the IL-15 mutein is an IL-15 agonist.

29. (Canceled)

30. (Previously presented) The IL-15 mutein fragment according to claim 28, characterized in that it comprises the sequence of any one of SEQ ID NO:7-18.

31. (Withdrawn) The IL-15 mutein fragment according to claim 27, characterized in that it is an IL-15 antagonist and that it still comprises the mutated 64-69 region.

32. (Withdrawn) The IL-15 mutein fragment according to claim 31, characterized in that it comprises the sequence of any one of SEQ ID NO: 19-28.

33. (Withdrawn) The IL-15 mutein fragment according to claim 31, characterized in that it comprises the sequence of any one of SEQ ID NO:77-80.

34. (Withdrawn) A nucleic acid coding for an IL-15 mutein according to claim 4, or for an IL-15 mutein fragment according to claim 27.

35. (Withdrawn) Vector containing at least one nucleic acid of claim 34.

36. (Withdrawn) Cell transfected or transformed by a vector according to claim 35.

37. (Currently amended) ~~Drug~~ **A pharmaceutical composition** which comprises an IL-15 mutein according to claim 5, and/or an IL-15 mutein fragment according to claim 28, and which optionally comprises a pharmaceutically acceptable vehicle and/or carrier and/or diluent and/or adjuvant.

38.-43. (Canceled)

44. (Previously presented) The IL-15 mutein according to claim 4, characterized in that said one substitution is a substitution of one of residues 45, 48, 51, 52, 64, 65, 68 or 69.

45. (Previously presented) The IL-15 mutein according to claim 5, characterized in that said one substitution is a substitution of one of residues 45, 48, 51 or 51.